



ACADEMY FOR EDUCATIONAL DEVELOPMENT

Communications Strategies for Development

A Summary

Laurence Wolff

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This summary report has been prepared by the Academy for Educational Development under Contract No. AID/csd-2829 for the Office of Education and Human Resources, Bureau for Technical Assistance, Agency for International Development. The principal reports upon which the summary is based have been prepared under subcontract with the Academy for Educational Development by the Educational Policy Group of The George Washington University, under the direction of Dr. Joseph B. Margolin; Dr. Everett M. Rogers, University of Michigan; and Dr. Dwight W. Allen and Dr. Philip R. Christensen, University of Massachusetts.

Section 220 of the Foreign Assistance Act of 1970 directs the U.S. Agency for International Development to undertake a wide array of activities aimed at assisting the developing countries in their use of communications technologies for education, agriculture, health, and community development. The technologies consist of radio, television, programmed teaching systems, computers, and communications satellites.

To carry out some of the activities mandated under Section 220, AID has contracted with the Academy for Educational Development to direct scientific research on the use of educational technology, to assess educational effectiveness and cost implications of various alternative communications systems, and to develop ways of applying electronic communications systems to agriculture, nutrition, population, and community development.

This report is one of a series prepared by the Academy and its subcontractors for AID under the terms of the contract. The reports in this series include:

1. Research and Development Priorities in Instructional Technologies for the Less Developed Countries
2. Research and Development Priorities in Instructional Technologies for the Less Developed Countries: A Summary
3. Alternative Communications Systems for Education in the Less Developed Countries
4. Broadcast Satellites for Educational Development: Possible Key Policy Decision Points, 1973-1978
5. Broadcast Satellites for Educational Development: The Experiments in Brazil, India, and the United States
6. Strategies for the Use of Mass Communications Media in the Technologically Developing Nations: Basic Education, Family Planning, and Nutrition
7. Communication Strategies for Agricultural Development
8. Communication Strategies for Development: A Summary
9. Technical-Economic Considerations in Public Service Broadcast Communications for Developing Countries

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FOREWORD

This is the eighth in a series of reports on policy issues on the use of instructional technology in the underdeveloped countries, prepared under contract by the Academy for Educational Development for the Agency for International Development. The studies were conducted under the general direction of the President of the Academy, and were carried on during the years 1970-1973 by nationally known specialists in educational technology.

This report provides a nontechnical summary of Report Numbers 6 and 7 which were prepared to help AID meet the need for new strategies and new kinds of programs in applying communications technology to the areas of basic education, agricultural development, population planning and nutrition education. The summary is intended to introduce the reader to the extensive investigations in these reports carried out by Dr. Joseph Margolin and his associates of the Educational Policy Group, Program of Policy Studies in Science and Technology, George Washington University, and by Dr. Everett Rogers, now Professor of Population Planning and Journalism, University of Michigan. The first chapter provides an overview of their principles and recommendations for program strategies. The later chapters deal with strategies for each subject area and note the examples of strategies developed by the George Washington University Group for Colombia, Indonesia and the Republic of Zaire.

The Academy uses this opportunity to thank Dr. Laurence Wolff for

his preparation of this summary report and to again thank Dr. Margolin and his associates, including Dr. Marion Misch, and Dr. Rogers, for their extensive work in preparing the technical reports. In addition, the Academy is grateful to Dr. Dwight Allen and Dr. Philip Christensen of the University of Massachusetts for their participation in these studies.

The Academy also wishes to acknowledge with warm thanks the advice, counsel and assistance provided during the course of this study by the representatives of the Agency for International Development. In particular, we are grateful to Dr. Clifford Block, Educational Technology Officer, TA/EHR/AID, who acted as project monitor for these studies, and to his associate, Ms. Annette Buckland. They have been exceedingly helpful on many occasions and we thank them for their assistance as well as their continued patience.

Alvin C. Eurich
President
Academy for Educational Development

I. INTRODUCTION

As part of contract No. AID/csd-2829 with the Bureau for Technical Assistance of the Agency for International Development, the Academy for Educational Development was asked to produce a number of reports on

. . . the development of alternative strategies utilizing the communications media . . . in the fields of nutrition, maternal/child health care, population control, and basic intellectual skills development among rural populations and underdeveloped urban communities.

The work was based on the hypothesis that

modern communications media can directly and effectively reach both individuals and specific groups within those populations, and at the same time can supply the more traditional channels of communication operating within a community with new sources of information. Strategies formulated hereunder to introduce and use communications media as a development tool will be designed in a manner that will produce the maximum improvement in modes of living for the target populations, but doing so with the minimal disruption of existing productive natural or cultural means of communication between individuals or existing groups.

The purpose of the work was to assist decision-makers and planners in USAID and developing countries to utilize the media most effectively for development purposes.

The Educational Policy Group of the George Washington University, under the direction of Dr. Joseph B. Margolin, did the major portion of the research on strategies and on the use of media for improved basic education, nutrition, and family planning. The Educational Policy Group

reviewed the literature on the subject, interviewed numerous consultants, and analyzed media strategies in Colombia, Zaire, and Indonesia. The team visited Colombia and Zaire and met with Indonesian educational leaders in California and Hawaii. The result was a two volume report which includes the following sections:

Volume I

Section A: An Executive Summary

Section B: An Overview of Strategy Planning and Implementation

Volume II

Section A: Media Strategies for Basic Education, Family Planning, and Nutrition Education

Section B: National Media Strategies for Colombia, Indonesia, and the Republic of Zaire

Section C: Bibliography and List of Persons Contacted.

In addition to their work, Dr. Everett Rogers, now Professor of Population Planning and Journalism at the University of Michigan, provided a report on alternative media strategies for agricultural development. His report was based on his experience from 1964 to 1969 as director of a study on diffusion of agricultural innovations in Brazil, Nigeria, and India, as well as on his numerous publications on the diffusion of innovations.

Also, Dean Dwight W. Allen and Professor Philip R. Christensen, of the School of Education of the University of Massachusetts at Amherst, contributed an essay outlining their own views on communications strategies for development.

This report is a summary of the work done by these researchers. It attempts to lay out in short and readable form their major conclusions and proposed strategies. The following section is a short summary of the major recommendations of the reports. The four sections which follow describe strategies for basic education, agricultural development, family planning and nutrition education.

Each of these latter sections attempts to deal with

- the nature of the field or discipline;
- the role of the media;
- programming strategies;
- training strategies.

II. AN OVERVIEW OF COMMUNICATIONS STRATEGIES

What is a Strategy

A strategy operates as a system which includes the purpose, the message, the medium, and the people who are involved. A strategy needs to be considered through time, especially since each activity undertaken will have an irreversible effect on the system.

There are four critical elements of strategies: the choice of objectives, the analysis of the nature of the user, the analysis of the behavior setting, and the selection of the medium to be used. These elements are not separate, but are the focal point of a single interacting system.

What is Communication

Communication may be regarded as the process by which an idea is transferred from a source to one or more receivers. It may have three major effects:

- changes in receiver knowledge;
- changes in receiver attitude;
- changes in the overt behavior of receivers.

There are two major channels of communication: the mass media and interpersonal contact.

Basic Education, Agricultural Development, Family Planning, and Nutrition Education

All four of the areas or activities discussed in this report involve

teaching people to control, rather than be controlled by, their environment. The definitions of these four areas are:

basic education: the development of capacities such as visual and linguistic literacy, the ability to think abstractly, the use of tools and numbers, and the capacity for systematic judgment and decision making;

agricultural development: a type of social change in which innovations are introduced into village systems to improve production methods and social organization and thence produce higher incomes and better quality of life;

family planning: the regulation of fertility to a family's own advantage, which may include spacing of children as well as the increase or decrease of fertility;

nutrition education: the teaching of the selection and utilization of a better balance of available foods.

Communications strategies in these four areas are basically similar, but require different emphases, as can be seen in the following section.

Some general differences among the four areas are:

- Much of family planning information is too intimate to be broadcast over the mass media.
- Nutrition education has less visibility than the other areas and is usually integrated into other activities.
- Basic education does not necessarily involve a change in overt behavior of the audience, but is often directed at their knowledge and attitudes.
- Agricultural development programs are traditionally directed at men, while nutrition education and family planning are directed at women (these practices are now in flux).
- Agricultural programs depend heavily on government and marketing infrastructure.

The discussion below covers what is common to all four areas.

Programming Strategies

The key strategy in programming for all areas is to explore completely the possibility of the use of integrated programs, which would combine the numerous problems of an individual's life into a "package"

of integrated material. Integrated programs have the advantage of dealing with the reality of the individual's life; but individual programs are more easily organized and presented.

An essential programming strategy is to differentiate between the urban and rural setting. The rural setting usually includes clear-cut village boundaries, and a number of stable and tradition-bound social and economic factors, such as a strong mayor or chief, defined social positions, and long traditions of tilling the soil. But the urban community often has neither a clear-cut boundary nor a long tradition; and often has a very disordered and fluid social structure.

Innovations involve a social risk in either the urban or the rural setting, especially for those who first adopt them. The best strategy for innovation requires the identification of community leaders, the use of change agents who are a part of the community, allowance for group decision making, and respect for the values and priorities of the community itself.

A number of mechanisms can be used singly or in combination to form the basis of a successful program, and their appropriateness needs to be considered for each program. They include the following:

- The didactic approach, which includes a variety of instructive methods, such as explanation, demonstration, or actual participation.
- The modeling approach. In this process the individual seeks to emulate the behavior of a highly regarded person in the group.
- Communication through social group channels. The message is injected into the normal communication process of the community.

- The use of traditional patterns to incorporate a modern message, such as the use of shadow plays or the casting of a horoscope in terms of family planning.
- The "best wedge," which is the choice of the strategy most appropriate to the present hierarchy of an individual's values and which will enable change agents to have their most immediate and visible effect. The "best wedge" enables change agents to get acceptance so that they may begin to educate the audience to the need for longer term and more general changes.

A good example of this mechanism is the development of "mothercraft" centers to assist mothers in common household problems such as buying and cooking food and providing more nutritious food. These centers may later be used to deal with family planning. The traditional mothers' love of children may also be utilized to point to the importance of family planning.

- Economic incentives. These range from food stamps to payments for vasectomies to new career opportunities for women. This strategy may backfire if the community perceives it as an attempt to bribe and misuse individuals for purposes inimical to the community.
- Ideology. This may form the basis upon which people can achieve consensus. It is especially strong in times of crisis. But the ideology must be appropriate if it is to survive.
- Maintenance of optimal distance between the present status of the group and the desired changed status. If the change is too great the group will not consider it possible or desirable. If the change is too small the group will not consider it worth the effort.
- Cooperative problem solving. Program coordinators attempt to deal in an interesting manner with the audience's articulated problems.
- Participation. The sense of participation by the individual will be very likely to enhance his acceptance of an innovation.

Training Strategies

The key strategy for training is to consider training change agent aides through the use of the media. This strategy would be more cost

effective than the use of more highly paid and professional change agents.

Change agents should be selected who are homogeneous (as far as possible) with the community and who understand and sympathize with the community's problems. The training of a change agent should provide him with an understanding of his place in the scheme of things and should also provide him with the appropriate level of education to do his task. Too much education may frustrate and confuse him, while too little education will not provide competency for the task. The media can provide the means for continual on-the-job upgrading of workers' skills, as well as provide feedback to the trainers on workers' problems and needs.

Much of the training carried out in the developed countries of individuals from the technologically developing countries has been unproductive or counterproductive. The design of these programs could include:

- Emphasis on problems of the developing country, to keep the student in contact with his country.
- Group work among students from the developing countries.
- Maximum active study in the developing country itself, perhaps with on-site developed nation professors.
- Use of developing countries with certain skills to teach other countries which lack those skills. For instance Colombia has achieved considerable success in nutrition education and Iran has made extensive use of volunteer and drafted field workers.

Evaluation Strategies

Despite almost universal agreement on the importance of evaluation, it has not played a significant role in most development programs.

Many of the evaluations which have been done are "summative": at the end of a long time span in the program's existence they ask, "Did this program succeed or fail, and why?"

A better approach is to combine this type of evaluation with ongoing "formative" evaluation, designed to help improve management and resolve problems.

From the "formative" point of view unsuccessful experiences are useful learning devices, rather than pretexts for punishment or cancellation of the program. This point of view would result in more complete cooperation between program developers and evaluators and thus aid them both.

Media Strategies

The two major specific strategies for use of the media are:

- For maximum effectiveness, the media must be combined with interpersonal communication. The media forum, a small organized group of persons who come together to listen to or watch a program and discuss its contents, is the best means of accomplishing this aim.
- The small media, such as flip charts, audio cassettes, and print material, offer great challenges for effective utilization.

The media are no panacea for development problems. They must be considered as part of the total system of needs, message, and resources over time.

The hardware should be appropriate to the program message and to efficient implementation of the program. The choice of hardware should be based on the following factors:

- appropriateness to program message and implementation;
- the effect of the media configuration on the message itself;
- appropriateness to the traditional communications network of the audience;
- availability of human resources to support the media;
- long-term projections of the effects of the media and on changing availability and cost of media configurations.

A key strategy in the development of software is "modularization" which will allow alternative parts to be selected according to their appropriateness to local needs, resources, services, and attitudes. A second key strategy provides for consultation with local leaders and "gatekeepers" of opinion in order to help define community needs, adapt programs to local setting, and identify possible barriers to the program.

One often overlooked software strategy is the use of telenovellas or radionovellas (soap operas). These programs can catch the attention of the audience rapidly. They also have the advantage of being able to depict the entire life span of the individual, and thus incorporate a spectrum of development messages.

The key to location of the media is to put them where the people are. Buses, trains or market places are good locations for motivational messages. School buildings are useful since they usually have sufficient space, chairs, electricity, etc.

Up to now the urban orientation of the mass media has tended to encourage migration to the city. The media message for rural areas must

have no trace of urban orientation. The ultimate rural strategy should be to provide to the rural areas the full range of appropriate services and opportunities parallel to those now available in the urban areas.

Consultation Strategies

The development agency often acts as a model for country agencies. For this reason interpersonal relationships, agency style, and agency structure should all be flexible enough to provide for self-evaluation and elimination of inappropriate behaviors. The agency should carefully work to define its own goals and objectives and the means to achieve them. Development agencies should incorporate the developing countries in mutual analysis of problems and goals, rather than to impose an already determined decision on them. Development agency decision makers will find that the time spent on seeking a convergence of common goals is well worth the effort during the implementation stage.

Development agencies should be careful to discuss the consequences of alternative policies, especially since the developing countries will have to bear the brunt of the weight of any failures. The agencies should particularly help developing countries to choose among competing media technologies. The agencies should emphasize "doable" technology strategies and should always demonstrate that the technology is secondary to the content of the message and the people involved.

Consultation among developing country agencies may be enhanced by establishment of a semi-autonomous "institute" where representatives of various agencies can work together. Carefully designed, such an institute

can provide effective training, good program development, and good communication among agencies. But this strategy runs the risk of creating jealousies concerning the new organization and of draining resources from already existing agencies.

III. COMMUNICATIONS STRATEGIES FOR BASIC EDUCATION

The Nature of Basic Education

Three types of skills are required to cope with the increased social complexity of a modern society:

- basic education, which develops capacities such as visual and linguistic literacy, the ability to think abstractly, the use of tools and numbers, and the capacity for systematic judgment and decision making;
- functional behaviors and skills for practical matters, such as learning a trade or providing good nutrition;
- situation specific skills, such as improving the yield of a given crop in a given area, utilizing the local transportation system, or using a specific contraceptive device.

Without the substratum of basic education, specific skills may often be misunderstood and misapplied.

Basic education should begin as early in life as possible. The learner must participate in the process, must have a model, must be convinced of the worth of whatever he learns, and must receive the encouragement and approval of his community. For pre-school and other young children, basic education can be taught directly. For adolescents and adults it is best taught through the means of desirable functional skills, such as literacy, job training, or mothercraft.

Literacy holds a special place in basic education. It is not only a valuable functional skill, but is also a powerful means to develop abstraction and reasoning abilities.

The Role of the Media

Modern communications technology can bring numerous advantages to basic education programs. It can:

- help to get attention;
- end the isolation of rural communities and urban slums by making these people aware of their participation in a larger social context;
- allow for lesser reliance on extensively trained and expensive field workers;
- improve visual literacy;
- set an example of skilled teaching for the change agent aide;
- be a catalyst for major systematic change of a program.

However, communications technology cannot be expected to be a panacea. It does not by itself assure high quality curriculum and programs, and must be linked with the total system of interpersonal relationships and provision of services. While it may provide per capita savings, the absolute costs for education are more likely to go up than down when it is used. Finally communications technology cannot simply be exported from one country to another without major efforts at adaptation. For example, a direct translation of "Sesame Street" has failed in Ethiopia, because it was not adapted to local needs.

Programming Strategies

The social strategy of basic education is to educate to a level

where basic skills can be useful while avoiding inflated expectations which may result in frustration, anger, and social unrest. The educational strategy is to increase the range of the individual's experience to a point where learning input is meaningful, but to stop before it becomes confusing. The ultimate aim is to educate just enough to enable people and their communities to function in a gradually improving society.

Learning can and often does begin with merely seeing or hearing, but it cannot be achieved without the active participation of the learner. In addition, the more primitive the learner, the less skill he has at the process of teaching himself new things. For this reason the media nearly always have to be linked with learning centers, field workers, etc. Real models and real learner activity have to be set up.

One strategy to achieve active participation is to assemble learners in groups such as mothercraft centers, men's clubs, or scout groups. Another strategy is to broadcast to the home and combine programs with follow-up materials, which may include later work at a learning center. A further strategy is to broadcast to the home and provide learning through entertainment. In this case the learning goals usually must be limited and supplemental.

Literacy. Since literacy is the most important element of basic education, it is important to consider separately media strategies for it. Literacy applies not only to reading, writing, and arithmetic, but also to visual literacy, mapping, and color coding.

Non-verbal literacies -- visual, mapping and color coding -- can be useful in the development of either city life or farm and agricultural skills. All implicitly teach logic and causal principles, and develop abstracting ability. The problems of non-verbal illiteracy should be researched carefully in each nation before a strategy for their dissemination is initiated.

City Community Centers. Poor urban communities of rural migrants often show signs of significant social disorganization, since traditional rural values are no longer applicable and new urban values have not been assimilated.

Educational media centers can help to form the nucleus of new social relationships in these communities. Such centers could emphasize specific city skills such as finding one's way about, obtaining work, and budgeting money, as well as provide basic education. Broadcast receivers located in the center would offer a special drawing card. The media centers should be at or near public health clinics and schools, so that services could be combined and distinct communities could be served.

These centers would help to adjust new migrants to the cities. At the same time they might keep up contact with the rural areas from which the migrants originated.

Parent-Child Centers. Mothers could bring their children regularly to parent-child centers, where, with the help of aides, they would

be trained as the teachers of their own and other children. Broadcasts would provide information and the center itself would provide "hands-on" practice and materials. These centers could build on the base of existing family service centers such as community centers or health clinics. The women who do well at the centers could be encouraged to help set up small day-care centers or to help in elementary schools.

This strategy illustrates use of the "best wedge" technique, which in this case exploits the mother's interest in the child's well-being to introduce her to concepts such as the importance of active learning by young children, the possibility of a work role for mothers, and the need for family planning to improve the well-being of children.

There may be a strong tendency to import European and American models of these programs without adaptation, since very little work has been done on this model in developing countries. Consultants will have to be carefully chosen to help adapt materials to the needs of developing countries.

In Zaire the existing Foyers where young women learn home arts can be easily adapted to become media oriented parent-child centers. Girls may continue to study in the centers, where they may be certified for para-professional roles in education, family planning, etc., while boys could go into occupational training.

In both Indonesia and Colombia these centers should be located in new towns and rural areas in order to help reverse the flow to the cities.

Home Broadcasts. Broadcasts directly to the home can utilize entertainment to provide an educational message. Broadcasts could also provide educational games which introduce children to active learning. These games would threaten no father's authority and no mother's competence; thus they would provide an educationally healthy experience to children without disrupting the traditional family.

Basic Education on the Job. Another strategy is to provide on-the-job training to young domestics in homes or workers in factories and plantations. In Arequípa, Peru, an average of 25 minutes per day on television is devoted to lessons in basic education, literacy, and arithmetic for domestics. The young domestic registers for the course, watches on the family set with the permission of her employers, does the homework assigned by television, and has weekly meetings with program personnel.

This strategy utilizes television to reach scattered students who cannot be brought together on a daily basis. It may be most cost effective in a country like Colombia, where the number of youths employed in households with television sets is high. In Zaire and Indonesia television is not widespread enough to make this strategy practical, but similar programs might be developed through radio.

Training Strategies

The use of aides rather than professionals is often cost effective, especially since the aide is usually much more nearly similar

to the audience than a professional. The media can be used to teach aides directly and regularly on the job. It can free professionals for other tasks, and can help to insure high quality training. Some of the major roles of the media in teaching aides can be in:

- training him in the subject matter;
- training him to organize the target population for listening centers;
- instructing him in how to use the smaller technologies, such as slides, flip charts, etc.;
- providing feedback to the central staff about field problems and effectiveness.

This training should include rewards to aides for creative work, and regular meetings with other aides and a supervisor.

In effect, the program could become a bypass to the formal educational system, which is usually characterized by traditionalism and elitism. It would also dramatize the role of science and technology in development.

Planning of such an operation should be centralized, but the training should usually take place in decentralized regional centers. Key factors in determining the extent of decentralization are those of distance, availability of expert consultants and teachers, and the extent of the existing communication network.

Basic Education Strategies in Colombia,
Zaire, and Indonesia

In Colombia Radio Sutatenza has been highly successful in teaching literacy. It provides radio broadcasts on topics of interest to a general audience, provides literacy classes at special centers, and publishes a special newspaper for rural persons who have recently learned to read. To build on this success, Colombia could consider the development of programs for the urban poor, especially since there continues to be significant migration to the cities. Another strategy would be to create a Communications Institute to centralize research and exchange of information on programming.

Zaire has not yet developed a nationwide basic education program. The principal need is to encourage national unity through the learning of a national language (French or Llingala) which would be used to help overcome tribal allegiances. The means of implementation should be through the establishment of a Comprehensive Government Broadcast System. Multiple broadcast and literacy centers would be required, since many native languages are spoken throughout the country and numerous areas contain populations which are linguistically mixed.

Indonesia has a similar problem of multiplicity of languages, as well as the indigenous national Malay language. It also has a wide expanse of territory on many islands. The optimum strategy would be rural basic education in radio-equipped literacy centers. Programming should initiate in a number of regional centers, although central planning might be done in Djakarta. The main aim should be to provide a sense of national unity and to reduce migration to the cities.

IV. COMMUNICATIONS STRATEGIES FOR AGRICULTURAL DEVELOPMENT

The Nature of Agricultural Development

Agricultural development is a type of social change in which innovations are introduced into village systems to improve production methods and social organization and thence produce higher incomes and a better quality of life. Agricultural development consists of more than just economic change: it also means food, jobs, and more equitable distribution of incomes.

Many agricultural development programs fail because they are un-integrated with other development programs and with the total needs of the audience. There may be a welter of government agencies concerned with agricultural development which often provide the audience with conflicting advice. When agricultural development agencies combine educational informational functions with regulatory punitive functions they are usually unsuccessful in introducing innovations.

Another problem of agricultural development programs is that they often help the richest farmers, thus contributing to greater inequities in the distribution of farm incomes. This occurs because the benefits of technological innovations usually accrue to the most responsive and modern groups, and has apparently been the case in the "Green Revolution" of southeast Asia and other areas of the world. The rich may be getting richer and the poor hungrier.

The Role of the Media

Typically agricultural extension offices are stocked with bulletins about agricultural topics, but these bulletins are usually written at such a high technical level that an advanced degree in agricultural science is required to understand them. In addition to this obvious failure, some of the major erroneous communications strategies are:

The large volume error. Many annual reports proudly state the thousands of bulletins issued, dozens of radio programs aired, and hundreds of clients attending local meetings. But little or nothing is said about what effect these messages had in securing the adoption of innovations. The assumption is that communication is a simple, direct cause-effect matter, something like a hypodermic needle. The large-volume error ignores the fact that communication is a process which requires careful planning based on the nature and needs of the audience.

Overdependence on mass media. Research shows that interpersonal communication is more effective than mass media in inculcating behavioral change. But many change agencies rely only on the highly visible mass media like radio and newspapers. A more adequate approach would also include consideration of the role of professional change agents as well as word of mouth exchange between a satisfied adopter and his peers. A particularly useful linkage of mass media with interpersonal communication is the media forum, which is discussed below.

Mass media alone cannot effectively teach about specific innovations, although they can provide general information about modernization and influence attitude change. In addition, the mass media will

not reach everyone. In a typical underdeveloped country, one third of the rural population cannot be reached by any medium, one third can be reached only by radio, and one third by radio, print media, and other media.

Overdependence on professional change agents. While change agents provide important services, the costs of training and servicing an entire rural population may be prohibitive. For instance, in Guatemala the 69 extension agents were able to reach about 5 percent of the farms, at an annual budget of U.S. \$0.50 per farmer. If every farmer in the country were to be contacted by extension agents, at least 20 times as many extension workers would be needed, and the yearly cost would be about \$10.00 per farmer. The per capita income for the rural population in Guatemala is only \$75.00. It would be impossible to justify the expenditure of 13 percent of this income on an adequate extension service. Furthermore, at present rates, it would take 28 years just to train enough agricultural extension agents.

Overdependence on "modern" channels. Traditional social communication exists side by side with the mass media, and may include traveling balladeers, village theater, puppet shows, and story-tellers. Most development planners have ignored the use of these channels.

Lack of a multi-media approach. The single channel approach (radio, television, or print) usually fails because it is not integrated into a total system utilizing the best communications channels for the delivery of particular kinds of messages, including interpersonal communication.

In some respects it is inappropriate to discuss the new communication technology such as satellite television, super-8 films, tape playback units, etc., since most agricultural development programs have not yet incorporated the simpler technologies such as flip charts, print, and radio, and the typical agricultural change agent uses very little communications technology. Nonetheless some of the new technologies hold great potential.

Satellite television. There has been almost no research so far on the use of non-satellite television broadcasting for rural development. Among the reasons that television has not yet been used for rural development are:

- high costs;
- the difficulty of producing relevant and interesting programs, especially since the rural audience is so different from the typical television producing team.

An attempt at using television for rural development is the Krishi Darshan program broadcast in India, which reaches about 70 villages near Delhi. The research on this program shows that about 50% of the watchers are small children, few farmers watch it regularly, and the program probably has low credibility since it only rarely shows an actual villager in his setting.

In spite of these problems, the government of India is proceeding with plans to launch an educational satellite for rural development. So far it has no plans for video forums or for linkage with the work of local agricultural change agents.

Thus, satellite television offers great potential for reaching many persons, but the use of television in any form for rural development has not yet been demonstrated.

Tape players. A tape player is a device which will play back a cassette or tape but does not record. It may be very useful as a means of supplementing the change agent's individual efforts.

Simplified communication technology. It is not the degree of sophistication of the communication technology which determines its effectiveness, but the relevance of the channel to the audience. Therefore change agencies should look at simplified technologies which are durable, foolproof, and low cost. Several which stand out and exist now are:

- A slide projector using a flashlight lens apparatus and flashlight batteries;
- flip charts;
- simple tape or cassette players.

Programming Strategies

The most important media strategy in agricultural development is the use of media forums, which are small organized groups of individuals who meet regularly to receive a mass media program and discuss the contents of this program. The mass medium is usually radio as in countries such as Indonesia, Nigeria, Ghana, Malawai, Costa Rica, and Brazil, but it may also be print, as in China, or television, as in India and Mexico.

Media forums may have numerous purposes in addition to that of aiding agricultural development. Radio Sutatenza (described elsewhere in this report) provides basic education, including literacy training, for people in the rural areas. The media forums in China provide family planning and agricultural information, and political indoctrination.

Social science research in India and Costa Rica suggests that media forums do affect knowledge, attitude, and adoption of innovations by a rural audience, and are more effective than the use of the media alone. The reasons individuals learn more when they are members of media forums are that:

- group pressure and expectations encourage attendance;
- group relationships encourage attitude formation, especially when the individual participates in making a decision;
- feedback is regularly provided to programmers and planners.

Despite this evidence, many national media forum systems fail because of problems of organization. While they are cheaper to operate than an army of professional change agents, they still require significant personnel and cost outlays in the form of organizers and supply and repair services.

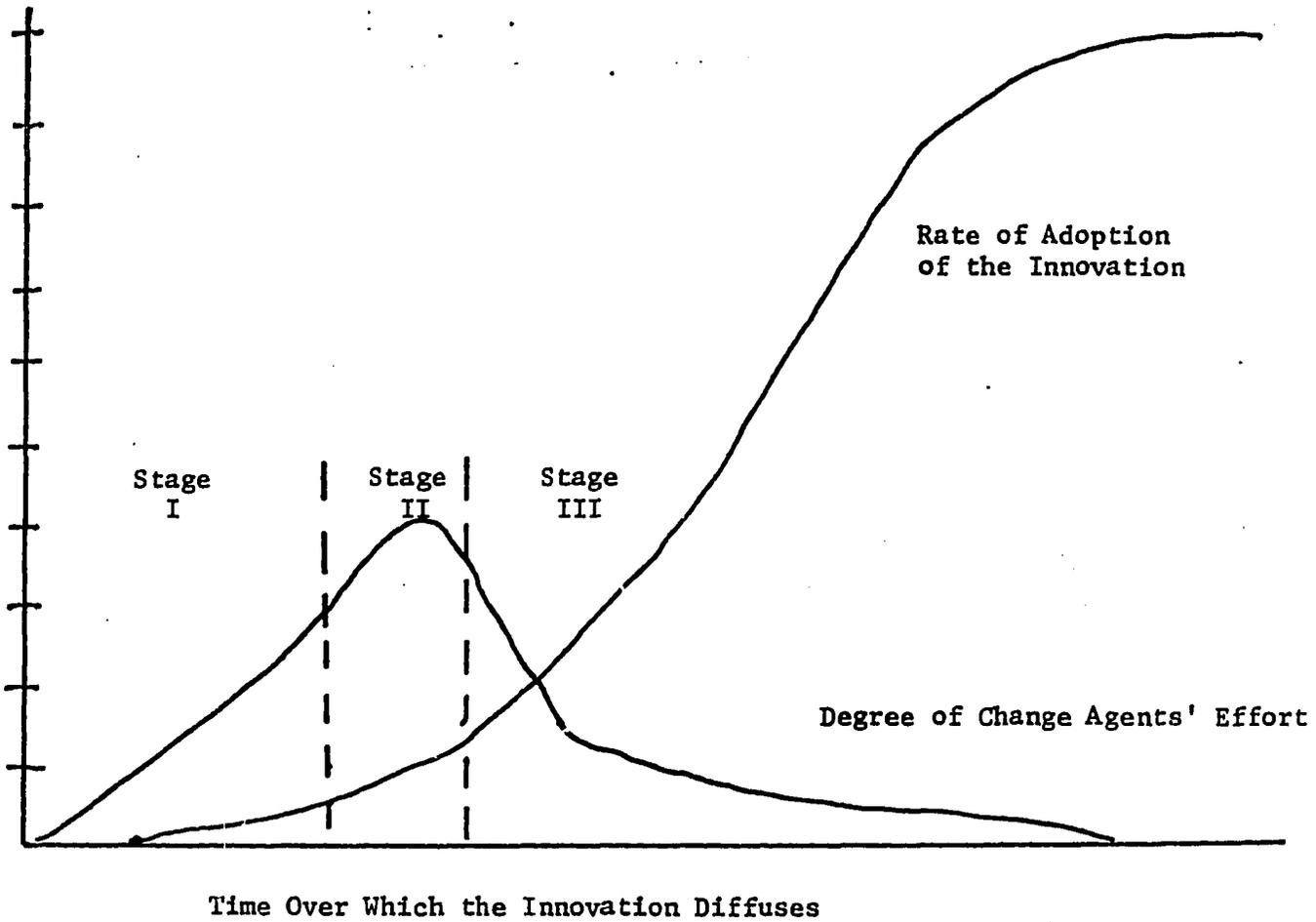
The single most important strategy for all change agents is to work through opinion leaders, members of the community who by reason of their status are able to influence the attitudes or behavior of others. By

working through opinion leaders the change agent is able to multiply his effectiveness significantly.

Change agents need to work actively to identify both the formal and informal opinion leaders in communities, and must be careful not to work exclusively with persons who for one reason or another are isolated from the rest of the community. In very traditional communities, the only ones willing to accept an innovation may be persons regarded as "deviants" by the rest of the community.

A good example of the opinion leader strategy is the use of the mobile agricultural school in a number of Latin American countries. A mobile school consists of a full-time coordinator who travels in a vehicle to a local village to offer short courses to village leaders. In Guatemala he offers a three-day course, which is given once a month (for four months) to a class of about 50 farm leaders. The participants are provided free transportation to the school and living expenses for the three days. The cost is less than that of normal residence courses.

The figure on the next page shows that change agent activity is greatest in the beginning and middle of an attempt to communicate an innovation. As the innovation spreads, the change agent plays a smaller role and interpersonal communication among peers plays a greater role in the diffusion of innovations. At this latter stage, three different aspects of peer communication need to be understood: discontinuances, rumors, and diffuser incentives.



Extent of Change Agents' Efforts and the Rate of Adoption of an Innovation.

At first, change agents' efforts do not result in many adoption decisions (Stage I), but then at Stage II when the opinion leaders adopt, the rate of adoption starts to climb under its own impetus, and the change agents can retire from the campaign. The present figure is an abstraction, based on data from several diffusion researches.

Source: Rogers with Shoemaker (1971), based on several empirical studies.

A discontinuance is a decision to cease use of an innovation after previously adopting it. It may occur because of dissatisfaction with the innovation, as when a new seed variety fails to produce the promised yield. A growing rate of discontinuances over time is especially serious, since each discontinuer is likely to broadcast negative messages about the innovation to other peers. Change agents need to pay close attention to the causes of discontinuances or else the optimism of early adoptions may end in the program's failure.

Rumors -- messages passed from person to person whose truth cannot be confirmed or denied by the receiver -- may spread very rapidly and thus encourage discontinuance. Rumors arise about matters of importance to individuals, but they usually deal with issues which are largely outside of the individual's control. For example, when chemical fertilizer was introduced to Eastern Nigeria, many villagers believed a rumor that fertilizer caused yam-rot. Unfortunately yam-rot broke out in many villages at about the same time that farmers first used fertilizer, and this coincidence caused many villagers to believe in a cause-effect relationship. Once rumors are accepted, there is a tendency to extend and distort them to other similar innovations.

The best strategy to counteract a rumor includes early identification, follow-up contact with adopters, high quality agricultural development services, two sided presentation about innovations (in which the disadvantages as well as the advantages of the innovation are discussed), and careful choice of word symbols and graphics to discourage the start of rumors. In the example of Eastern Nigeria, the authorities apparently

dealt successfully with the rumor by radio programs and by launching a campaign for use of the chemical aldrin to combat yam-rot.

Diffuser incentives are direct or indirect payments in cash or in kind to encourage adoption of an innovation. This process encourages peer group communication about the innovation.

Experience has shown that teachers often resist television programming when they regard it as a threat to their own status. In the same manner agricultural change agents may feel threatened by innovations such as media forums. Administrators may also fear the need for restructuring their agency. Some of the best strategies to combat resistance to change within change agencies are:

- Emphasis on pre-service and in-service training in communication strategies. If future change agents are taught with flip charts, they are much more likely to use them themselves.
- Constant communication and explanation of innovations to program administrators.
- Exchanges of information about communications strategies among countries to encourage innovations by example. For instance the idea of the mobile school has spread rapidly throughout Central America with the past few years.

Training Strategies

The change agent is a communication link between a traditional social system and a more modern one. This function often causes conflict in the mind of the change agent. He may often over-identify with the professional group to which he belongs and may act to satisfy his superiors rather than to influence the behavior of his clients.

This means professional change agents must be trained with great care. For example, since many university graduates in agriculture do not come from a farm background, it is necessary to introduce them to the realities of rural poverty. In the mid 60's a group of newly employed agricultural change agents in Colombia were required to live for two weeks with a peasant family. They complained bitterly about poor food, rats, and other disturbances, but at the end of two weeks they admitted that they could now begin to look at the world through a peasant's eyes.

Some other problems affecting professional change agents are their excessive youth and a high rate of turnover, especially since they are usually enticed by higher salaries from the private sector.

Strategies for the training of professional change agents should include:

- courses on the theory and practice of social change and on communication skills;
- in-service training to improve communication skills and to develop greater empathy with villagers;
- recruitment of professional change agents with some farming background and who are from villages.

As noted in the section on basic education, the training and use of change agent aides, who are not professionals or university graduates, is less costly than the use of professional change agents, more aides can be trained in a shorter period of time, and the aides may be more

effective since they will have much more in common with their clients than the professionals. The qualifications of these aides may vary greatly depending on the tasks involved: some may have several years of training while others may have only a few weeks training or no training at all. Some of the problems of the use of aides include the following:

- They must be properly supervised by professional change agents.
- They may not fully understand the content of their message.
- They may be similar to their clients in some aspects but different in other crucial aspects such as age, social class, etc.
- They may aspire to imitate professional change agents and thus lose the principal advantage they have in being similar to their clients.

V. COMMUNICATIONS STRATEGIES FOR FAMILY PLANNING

The Nature of Family Planning

The phrase "family planning" indicates efforts to assist people to regulate their fertility to their own advantage. It can include the spacing of children as well as the increase or decrease of fertility and may be geared to any country's national policy. For instance, while Indonesia is anxious to limit its population growth, "pro-natalist" Zaire, which wants to populate its empty rural areas, may also seek family planning help in its urban areas to reduce malnutrition, venereal disease, and infant mortality. Colombia is an example of a country where both government and private groups actively work in family planning but where an official policy cannot be announced.

The Role of the Media

The relevant research up to now shows that, in combination with interpersonal contact, the mass media can affect a population's knowledge and acceptance of family planning. The mass media can play the following specific roles:

- increasing knowledge and awareness of family planning, so persons are more susceptible to interpersonal influences;
- making people aware that the subject of family planning is a legitimate one for discussion;
- providing information on location and type of services available;
- reinforcing and validating what people learn from other sources;
- training field workers (this role has not yet been widely explored).

The major limitation of the mass media is that, without interpersonal communication, it cannot motivate large numbers of people to adopt family planning. Also family planning information is often too intimate or complex for the public media. Finally, without the infrastructure of available devices, people cannot get access to materials.

Programming Strategies

A well planned program should be dynamic and flexible over time, and should include assessment of people's needs and continuing evaluation and feedback. Some major needs are:

- Coordination, in terms of the following dimensions:

Institutions

Public (e.g., government programs, clinics)
Private (e.g., commercial; sale of contraceptives)
Non-Profit (e.g., service-oriented; family planning associations, women's groups, special interest organizations; universities; population and communications research; manpower development)
National
International

Levels and Methods of Communication

Public Information (via mass communications to general audience)
Community Education (small group or person-to-person communication via workers to specific audience)
In-School Education

Disciplines

e.g., Health, education, media/communications

- Adequate selection, training, and utilization of manpower. One of the key decision points for training occurs when the first wave of acceptors ends, and there is a drop-off in new acceptors. Workers will then have to be trained in more flexible working styles and strategies.

- Development and adaptation of media and materials, which must be based on clear perception of the audience's needs and values and the cultural context.

Adapting materials to local use. In the modularization strategy core family planning materials or scripts are produced with alternative modules which can be inserted or deleted according to local needs. This strategy helps to overcome the shortage of trained communications personnel and of software relevant to local needs.

A second strategy is to consult with local leaders to determine community needs and to aid in the adaptation of material to the community. By directly involving these people, their support may be more easily gained.

Finally, the small technologies, such as 8 mm films, tape recorders, and the Audio Flip (a flipboard with locally produced materials and a cassette recording) need to be more extensively utilized.

Direct communication about family planning may not be feasible in many countries or communities. In a nation like Zaire, for example, where any sort of family planning is politically sensitive and large portions of the population are not ready for it, the mass media could be used indirectly to create a context in which parents could improve the quality of their children's lives, for example, through:

- promoting the idea that smaller families are better able to educate their children;
- developing employment opportunities for mothers, so that they can find satisfaction in other than child bearing roles.

Utilizing family planning or health clinics as settings for broadcast media programs has the following advantages:

- coordination of media communication with interpersonal communication;
- on the spot evaluation and feedback;
- preparation of the audience and immediate follow-up by local workers;
- immediately available services;
- utilization of the media as a drawing card to bring people to the clinics;
- use of the group setting to encourage attitude changes.

A similar strategy is to utilize mobile clinics as media centers. These have the advantages of working in relatively sparsely settled rural areas or in areas which have no permanent health infrastructure. They can utilize entertainment to draw their audience.

Family planning information can also be integrated into non-formal educational programs, such as those of Radio Sutatenza in Colombia and Telescuola in Italy, as well as in agricultural extension, day-care centers, vocational training programs, mothercraft centers, and women's and men's clubs. Programs designed first to satisfy basic needs such as health, education, food, or housing can thus prepare persons for feeling the need for family planning; and the integration of all these efforts can improve the effectiveness of each one.

Other locations for family planning through the media may be in local recreation centers or in the market itself, where open-air newsreels or soap operas on family planning could be run regularly.

The following programming strategies are useful to achieve the aim of stimulating interpersonal communication:

- using local stations with conversational formats;
- using local popular figures to deliver a message;
- actual "slice-of-life" interviews;
- audience participation in which a program personality could answer in person or respond to questions mailed in;
- variety programs with brief catchy segments (like Sesame Street);
- entertainment to capture attention;
- dramas or soap operas illustrating family planning problems;
- radio or television "spots."

Strategies for integrating family planning with other development activities. In the integrated approach family planning communications are introduced in the context of or in combination with other programs, such as maternal and child health, adult education and literacy training, nutrition, agriculture, vocational training, or child-care. In many situations a specialized approach may be necessary. For example, Colombia has begun with a specialized approach because government support is not strong and voluntary and medical organizations have taken the lead. The specialized approach may also be adequate at the beginning of a program when the initial acceptors are already self-motivated.

The integrated approach has several advantages:

- consistency with government policy;
- convenience for those using the services;
- reassurance that family planning is a legitimate component of health and social services;
- privacy and anonymity for those who don't want to broadcast that they are using family planning services;
- possibility of using the "best wedge" technique, i.e., satisfying people's immediate felt needs as a means of introducing them to family planning concepts;
- developing a person's sense of mastery of various elements in his own life, a process which can have a cumulative impact on the individual;
- avoidance of the impression that family planning will be a panacea for overall problems of food, health, clothing, and education.

An integrated approach can also use existing organizations and structures, such as hospitals, mothercraft centers (in Guatemala and the Philippines), labor unions (in Colombia), agricultural agents (in Colombia), etc.

Training also needs to be integrated. Family planning workers should know of the existence of other social and health services and when to refer persons to them.

Iran's family planning program is one of the most ambitious examples of an integrated approach to training in the developing world. The educational program began with a heavy flow of information from local and professional leaders. Then orientation sessions were held across the nation for all health personnel, and family planning was

introduced to the curriculum of schools of social work, nursing, midwifery, home economics, teacher training institutions, malaria eradication, religion, and the Vocational Service Corps (The National Service Corps, which is an alternative to military duty after 6 months of military training, became a key element in the rapid development of the program). In addition, material on population, sex education, and family planning was introduced into textbooks for grades six through twelve, and into the university curriculum.

Two useful examples of integrated programs are in:

Haiti. In "Conversations with Dr. Bombosh" (a voodoo name), a doctor utilizes a "Dear Abby" framework to read, discuss, and respond to verbatim letters from listeners about health, nutrition, child care, and family planning.

El Salvador. PATER, which stands for Parenthood, Food, Housing, Education, and Religion, is the name given to a weekly radio program which appears in prime time (right after the Sunday soccer game) for half an hour a week. The format is fast and varied, including: answering questions from listeners, a talk by a nationally known artist, editorials, interviews, information, public opinion, and drama.

Training Strategies

Each worker in the family planning system should understand the roles and functions of others in the system. In the clinic care should be taken to educate professionals to realize that family planning has

psychological, social, and economic as well as medical implications; and men and women need respect, reassurance, and education about more than reproductive physiology.

Selection is the better half of training. The main principle is to select workers who are "culturally acceptable" to the population with which they are working. These workers should be similar to their audience, and if possible be community opinion leaders.

Some useful strategies for selection and training include:

- using non-professional local people part-time on an incentive basis to supplement full-time professional field workers;
- training people who are already field workers in related fields;
- placing greater emphasis on training in psychology and sociology and less on reproductive physiology.

Family Planning Strategies in
Colombia, Zaire, and Indonesia

Family planning in Colombia is recognized and included in government services, but because of considerable church opposition and lack of support from much of the medical profession, there is no official policy. There are three principal family planning agencies in Colombia:

- ASCOFAME trains personnel and conducts research.
- PROFAMILIA, a private family planning organization founded in 1966, has 32 clinics and provides a significant public communications effort. It emphasizes responsible parenthood and maternal and child health rather than "birth control."

- Bienestar Familiar, the government health organization, has 600 clinics and 26 hospitals. It places family planning on a low priority and does not support wide-scale information or training activities.

Almost all family planning efforts have been in the urban areas. The Coffee Growers' Association has begun a pilot program through the use of the cafeteros, the extension agents in the coffee growing areas. A few other organizations work in a small way, mostly in urban areas.

Colombia's family planning programs have evolved significantly over the past eight years. But new and expanded efforts are now needed, especially since the first phase of "ready" acceptors in the urban areas has ended. Below are some suggested strategies.

Mass media in clinic settings. Beaming radio or television programs to clinics would serve the direct function of educating the women in the clinic and the indirect one of inhibiting the spread of rumors. The media programs could include soap operas on a variety of topics, which could reach a general audience as well as a clinic audience. This strategy is particularly appropriate to Colombia since an infrastructure of health clinics already exists. In the preparation and follow-up of the broadcast, field workers could use simple audiovisual technologies.

Mass media with Mobile Clinics. Mobile clinics to reach the rural areas could also be equipped with radio and with small media. Benefits would include lower cost, modularization, specialized training, and a

significant government presence in rural areas. Some of the issues which would have to be resolved include the relationship of mobile units to other development efforts as well as the development of appropriate materials.

Mass media and other technologies for training. Radio can be used for limited training of field workers, especially in how to adapt materials to local needs and how to use simple technologies in teaching about non-controversial family planning problems. Other non-broadcast media, such as tape recordings, film loops, slides, etc., would improve learning, reduce the need to go to courses in distant cities, and train the worker in technologies that he will have to use in his work.

Integration of family planning with agricultural extension. As noted above, the Coffee Growers' Association has recently integrated family planning into its extension program on a pilot basis. With the help of PROFAMILIA, cafeteros are distributing contraceptives. This is the first program to reach the rural areas, and also the first to provide information to rural men as well as their wives. To succeed, it will require more training of the cafetero to his new role, the provision to him of audio-visual material addressed to farmers, and radio programs to advertise his new role.

United States assistance. Any U.S. assistance should be cooperative rather than unilateral, especially through considering the

implications of the Colombian experience for U.S. family planning efforts, in terms of the role of the extension agent and the development of the communications media.

At this time the government of Zaire provides almost no support for family planning and almost no health infrastructure exists. Both the law and government policy prohibit use of the mass media to disseminate family planning information.

The Zaire government argues that it needs to expand its population to fill the empty rural spaces. But urban populations are already experiencing overly rapid growth, unemployment, and poor housing. In urban areas, women are beginning to achieve some financial independence and freedom from restraints imposed by traditional life.

These changes improve the climate for the introduction of a responsible parenthood or child-spacing program, which could be the principal alternative strategy for Zaire. Child spacing implies achieving the level of fertility that allows people to have the number of children they want and need, while maintaining the health and well-being of mother and children. A form of child spacing through continence has been practiced in Zaire, with intercourse sometimes forbidden with a woman for two years after the birth of a child.

The strategy in rural areas would be to integrate family planning, in terms of reducing infant mortality and venereal disease (until there is a change in government policy), into a rural life extension education

program. The strategy in urban areas would be to introduce the idea of "child-spacing" through informal education on the radio, in Foyers (women's home economics clubs), and in post-partum programs in hospitals and clinics. In this way family planning would be more acceptable, since it would be regarded as a family health service.

A first priority step will be to introduce family planning information to those who influence or determine government policy, so that leaders might consider altering the present national policy. A second priority will be to provide information to political, social, and business leaders who have access to large numbers of people.

President Suharto of Indonesia has publicly endorsed family planning and has organized a national level organization to administer programs. In fact family planning is still a low priority. The government still pays extra money and rice for wives and children of all its employees, and the penal code forbidding sale of contraceptives has not yet been repealed. The family planning organization had good paper plans but little implementation as of 1971, since it had been underway only since 1969.

Some key strategies include:

- use of media in mobile clinics and in post-partum programs;
- use of small media to explain family planning to key social leaders (as described for Zaire);
- pre-testing of culturally positive language for communications efforts (direct translation of terms like

planning and birth control have negative connotations);

- media to train field workers and managers;
- media to provide a quick response to rumors;
- encouragement of local contests to develop creative media materials;
- indirect media programming efforts such as soap operas, or "musjawarah" (the search for consensus through reconciliation and synthesis of opposing views);
- consideration of the use of traditional media;
- enlisting of support from local radio broadcasters;
- integration of family planning efforts into areas such as education and nutrition, which at present have a higher national and individual priority.

VI. COMMUNICATIONS STRATEGIES FOR NUTRITION EDUCATION

The Nature of Nutrition Education

Food habits are an integrated part of an individual's life. They result from all the vectors affecting him -- his own organism, the nature of the groups to which he belongs and the nature of his physical environment.

Nutrition education, which teaches the selection and utilization of a better balance of available foods, involves the processes of imparting dissatisfaction with present food habits, awareness that alternatives exist, motivation to adopt new alternatives, and information about specifics of alternatives. It often requires overcoming culturally and socially determined taboos and practices. Like all the activities discussed in this report, nutrition education involves teaching people to control, rather than be controlled by, their environment.

Nutrition education has grown in importance recently because of a new awareness of the relation of diet to physical and mental development. A recent report states that each year 30 million children are handicapped both mentally and physically by protein deficiencies alone.

The Role of the Media

The media can help to provide social pressure to change food preferences, can reach illiterates with visual materials, can provide a variety of types of exposure to the same message, can extend the influence of nutrition workers,

and can improve the training of nutrition education personnel. For behavior change to occur, the media must be linked with inter-personal contact.

Programming Strategies

One of the principal problems in nutrition education throughout the world is a lack of coordination among institutions and a lack of trained nutrition workers. Two strategies to overcome these problems are:

- A. A nutrition education network which would provide coordination and communication among related programs. A single agency could be set up to be a central information processing source and could also provide useful training opportunities. The media could provide contacts between country regions.
- B. The use of "multipliers," i.e., the training of other development workers to understand nutrition needs and problems. Colombia has programs for training nutrition "multipliers" which include:
 - formal education in nutrition in schools of medicine, dentistry, agronomy, etc.
 - in-service training for doctors, nurses, agronomists, etc.
 - formal education in nutrition at the subprofessional level in teacher training schools, nurses' aides programs, apprentice training, paramedical programs, etc.
 - in service training for teachers, nurses' aides, agricultural extensionists, etc.

Between January, 1963, and January, 1970, Colombia trained almost 30,000 multipliers, and nutrition education activities reached over 300,000 people.

Multiplier programs take advantage of existing institutions until additional and more specialized resources are developed, and also enable nutrition to be integrated with other development efforts.

The base strategy at the local level is illustrated by the "mothercraft" center, which has been successful in Latin America, the Philippines, and Africa. The mothercraft center combines a child day clinic and maternal education with the serving of a well balanced diet of local foods at a minimal cost. The mother participates in education and group discussion-decision-implementation in a comfortable and casual behavior setting. The skills taught are directed to the audience's felt needs and are immediately useful. A "monitor," who is selected and trained on the basis of her ability to command respect, provide a good example, and interact well with the mothers, provides instruction. The group size is small enough to allow individual attention. As an adjunct to the center, agricultural extension workers may provide programs to fathers.

The mothercraft center is geared well to needs in developing countries and is flexible enough to adapt to changing needs. Its main drawback is that it requires good facilities and continued servicing, feedback and evaluation. The media can substitute for some of this servicing and thus lower costs.

The key decision points for nutrition strategies in general include:

- assesment of needs and objectives
- location of authority for programs
- utilization of present and future resources

- financing
- selection and training of personnel
- program development--both integrated and specialized
- assessment of goals and accomplishments
- guidelines for implementation, evaluation and in-progress revision of programs
- relationship of the program to national priorities

Media Strategies. To realize their greatest potential, the media must be carefully adapted to the situation and audience at hand. In addition, their characteristics impose limitations on the kinds of activities in which they can engage. The choice of the media must also be based on the extent of the region to be covered and the coverage characteristics of radio, television, or smaller media. Programs will need to be broadcast when a number of target groups are listening and will need to be coordinated with nutrition education activities.

The media can provide "supplementary" programs to assume some of the duties of scarce and over-worked nutrition professionals, but these will have to be directed to small groups rather than to a general audience.

Complementary programs to create awareness, provide information, and increase motivation can go to a general audience. Examples of such programs would include soap operas, a gourmet show which teaches good nutrition (especially useful in countries where convenient but faddish and generally lower quality foods are replacing superior dietary patterns), or a show about marketing tips and budgeting skills.

One area of serious concern in the media is that of commercial advertisements for food of high "status" and cost but relatively low nutritional quality. The advertisements have their most destructive effect in the urban lower-middle and lower classes and in some of the less remote rural areas. Nutritionists will have to devise strategies to counteract these effects.

Training Strategies

Training of nutrition professionals should as far as possible be indigenous to the country. With the use of media such as closed circuit TV, video and audio tape etc., scarce experts might have to spend a shorter amount of teaching time in the classroom.

Similar uses of broadcast and audio-visual technologies can be made in training para-professionals and sub-professionals. Core materials could be made available to "satellite" training centers and to clinics. The media can also be useful for in-service training of workers.

Potential nutrition workers should be chosen for their capacity to relate to their audience and for their status as local opinion leaders. They should understand the scientific basis of nutrition: "tunnel visioned" or monovalent (knowledgeable in only one area of nutrition) workers are best avoided. Finally, they will need to understand local conditions and the process of adaptation of changes in nutrition.

Nutrition workers should receive training in the use of audio visual aids. Collaborative efforts between nutritionists and communications

experts should be encouraged, with the eventual goal being the development of communicators with expertise in nutrition and health promotion.

Training contact should be flexible, especially since nutrition habits in a country may change rapidly with rural-urban migration and under the pressure of advertisements. Nutrition workers should undergo periodic refresher courses. At the same time, national nutrition leaders should keep in careful consultation with other related agencies and ministries.

Incentives of cash or status can be provided to workers who make creative use of the media or who solve significant problems. Such incentives would encourage active participation and enthusiasm.

Nutrition Strategies in Colombia, Zaire,
and Indonesia

Colombia has had a wide-ranging and successful nutrition education program since 1943. The basic needs now are to extend the program to more rural areas and to develop infrastructure.

The use of the media should coincide with expansion of services to the more rural areas. It can provide direct information to the audience through soap operas, etc., as described previously, as well as help train local people as field workers.

Zaire's political leaders appear to recognize the need for nutrition education, but they have not yet attempted or announced new programs. Problems include a lack of an articulated national policy, lack of a strong overall agency for nutrition education, lack of professional expertise, or a lack of a health services structure.

The principal strategy for Zaire should be creation of a nutrition education communications network. A coordinative agency associated with a university could promote cooperation and mutual assistance among the public, private and relief organizations and help develop a national radio program, or adapt existing programs to nutrition education. It could also improve training and provide for the accumulation of data and statistics. The agency could have decentralized offices in the regional universities.

At the local level, existing institutions such as women's clubs and health clinics could be utilized to spread nutrition education, and would thus save costly resources. A multiplier strategy similar to that described for family planning could include the training of agricultural extensionists, teachers, girl scouts, and other field workers.

The Indonesian government has developed policies and organizations for nutrition education, but has not achieved widespread implementation, principally because of lack of coordination and infrastructure.

A major strategy should be to encourage substitute foods which are in relative abundance but not eaten for social or cultural reasons. Some possibilities include:

- media programs aimed at the upper classes - their value as reference groups could be beneficial in overcoming taboos against certain foods (e.g., the consumption of fish by small children) and encouraging lower class families to avoid high priced high status convenience foods.

- shadow plays and radio dramas
- incorporation of nutrition messages in literacy programs
- use of existing health centers to train workers and to provide nutrition education programs for the general audience
- use of the Pramuka movement, which includes scouts who help to improve production and consumption of food in villages, as an additional resource to train workers or work directly with the populace
- coordination of non-verbal print materials with other media or non-media nutrition education activities, so that the masses of illiterates can be reached.